

REMARKS

Applicants have discovered that ethylene-vinyl acetate based hot melt adhesive formulations that can be applied at low temperatures (i.e., 200°F to 300°F). The adhesive compositions of the invention, which exhibit good heat stress values and cold tolerance, and are produced using ethylene-vinyl acetate copolymers having a vinyl acetate content of 30-50 wt % and a melt index of 700 to 4000 dg/min., 30-60 wt % of a terpene, modified terpene and/or terpene phenolic tackifier, and 15 to 55 wt % of a wax having a melting point of 125 to 180°F.

Claims 1, 4-9, 11, 14, 16, 17, 18 and 20 are rejected under 35 U.S.C. § 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 (a) as obvious over Kosaka *et al.* (U.S. Patent No. 3,944,695). Applicants disagree.

Kosaka discloses a heat printing sheet comprising a substrate having coated thereon a composition comprising 10-60 % by weight of a tackifier, 5-50% by weight of a wax, 10-60% by weight of an ethylene vinyl acetate copolymer that contains 5-50% by weight vinyl acetate that has a melt index of 4-1000g/10min, 5-40% filler and a pigment. The components are selected to be useful for the contemplated purpose and must contain a filler and a pigment. While Kosaka discloses and claims that the ethylene vinyl acetate copolymer has a melt index of 4-1000 g/10min, preferred for use is an ethylene vinyl acetate copolymer having a melt index of 15-400g/10min (col. 1, lines 61-63). The ethylene vinyl acetate in the exemplified embodiment (see example 1) has a melt index of 150g/10min. There is no disclosure or suggestion that the components of Kosaka can be formulated for use as an adhesive for bonding one substrate to another. There is no disclosure or suggestion that the compositions of Kosaka can be used to form cartons

cases and trays as claimed by applicants (claims 9, 16, 20). Applicants' claimed hot melt adhesive composition is not anticipated by Kosaka.

Kosaka also fails to provide any suggestion to use the components claimed by applications to form a composition that can be applied to a substrate at 200 to 300°F and be capable of bonding the substrate to a second substrate.

Kosaka does not as urged by the examiner teach an adhesive composition that is substantially the same as that claimed by applicants. The examiner has failed to adequately explain why the function property or characteristic claimed by applicants is inherent in the cited prior art. Applicants submit that the examiner has failed to established a *prima facie* case of obviousness.

Withdrawal of the Section 102/103 rejection over Kosaka '695 is requested.

Claims 10, 13, 15 and 18 under 35 U.S.C. § 103 (a) as being unpatentable over Kosaka *et al.* (U.S. Patent No. 3,944,695) in combination with Kosaka *et al.* (U.S. Patent No. 3,896,069). Claims 10, 13, 15 and 18 required that the tackifier be a terpene phenolic tackifier. The examiner urges that it would have been obvious to use a terpene phenolic tackifier since Kosaka '069 discloses use of such tackifier in hot melt adhesive compositions. Applicants disagree.

The invention of Kosaka '069 is directed to a hot melt composition that contains a modifier prepared by oxidizing a low molecular weight polypropylene having an acid value of 1-20 in a ratio of 1/100 – 10/10 by weight to the ethylene-vinyl acetate copolymer. All exemplified compositions contain oxidized low molecular weight polypropylene component and an ethylene vinyl acetate polymer having a melt index outside the cope of applicants claimed composition. None of the compositions disclose

use of an ethylene vinyl acetate copolymer, terpene phenolic tackifier, or wax, as claimed by applicants, and there is no disclosure suggesting such combination.

It is well known that in order to establish a *prima facie* case of obviousness; three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. Second, there must be a reasonable expectation of success. Third, the prior art reference(s) must teach or suggest all the claimed limitations. Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicants' disclosure. See, *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991) and MPEP 214.

The examiner has failed to meet these requirements. The prior art neither suggests, nor provides any motivation to modify or combine the reference teachings. The prior art fails to provide teachings suggestive of a reasonable expectation of success. The prior art fails to teach or suggest all the claimed limitations. Applicants submit that the examiner has failed to established a *prima facie* case of obviousness.

Withdrawal of the Section 103 rejection over the combined disclosures of Kosaka '695 and Kosaka '069 is requested.

Claims 1, 4-11 and 13-20 are rejected under 35 U.S.C. § 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 (a) as obvious over Kosaka *et al.* (U.S. Patent No. 3,896,069). Applicants disagree.

Kosaka '069 discloses a hot melt composition that contains a modifier prepared by oxidizing a low molecular weight polypropylene having an acid value of 1-20 in a ratio of 1/100 – 10/10 by weight to the ethylene-vinyl acetate copolymer. All exemplified compositions contain oxidized low molecular weight polypropylene component and an ethylene vinyl acetate polymer having a melt index outside the cope of applicants claimed composition. None of the compositions disclose use of an ethylene vinyl acetate copolymer, terpene phenolic tackifier, or wax, as claimed by applicants, and there is no disclosure suggesting such combination.

Applicants submit that Kosaka '069 neither anticipates nor renders obvious the claimed invention.

Withdrawal of the Section 102/103 rejection over Kosaka '069 is requested.

Claims 1, 4-7, 9, 10, 13, 17, 18 and 20 are rejected under 35 U.S.C. § 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 (a) as obvious over Liedermooy *et al.* (U.S. Patent No. 5,500,472). Applicants disagree.

Liedermooy disclose a hot melt adhesive composition, specifically, an ethylene n-butyl acrylate based hot melt adhesive. The adhesive of Liedermooy, in addition to ethylene n-butyl acrylate copolymers may optionally contain up to 20% by weight of another polymeric additive, such as ethylene vinyl acetate containing 10-40% by weight vinyl acetate. There is no disclosure or suggestion that a low application temperature hot melt adhesive may be prepared using an ethylene vinyl acetate copolymer as claimed by applicants (5-60% EVA with 30-50% VA), let alone formulating a hot melt adhesive comprising 35 to 60 % by weight of an ethylene vinyl acetate copolymer and required for used in claim 8 (35 wt % EVA), claims 11 and 19 (35-45 wt % EVA), claim 14 (35-60 wt


% EVA). Applicants submit that the claimed invention is not anticipated by Liedermooy. Liedermooy fails to disclose an ethylene-vinyl acetate based low application temperature hot melt adhesive containing a terpene phenolic tackifier, let alone use of the tackifier is amounts of 30 to 60 wt %. Liedermooy provides no disclosure that would motivated the skilled artisan to use amounts of ethylene-vinyl acetate in excess of 20% by weight. Applicants' claimed hot melt adhesive composition is not anticipated by Liedermooy. Liedermooy provides no suggestion to use the components claimed by applications.

Applicants submit that Liedermooy neither anticipates nor renders obvious the claimed invention. .

Withdrawal of the Section 102/103 rejection over Liedermooy is requested.

Favorable and early action solicited.

Respectfully submitted,


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